



### 2013 International Year of Statistics Richard Empley

As many readers will know, the BIR is actively participating in the International Year of Statistics 2013, and there are several ways that members are encouraged to contribute to this event. Please join in where you can!

When the public-focused website of the International Year of Statistics is unveiled later this year it will feature lots of exciting content informing members of the public about the role of statistics in everyday life. So that this content remains fresh and is frequently updated, the Steering Committee is seeking content contributions from participating organizations throughout the world in several subject areas.

Statistic of the Day—A series of four or five brief, informative statistical facts about your country, for example, Anyone can contribute items on these

its population, economy and education system; the health of its citizens; and similar social, economic, government and other relevant topics.

Around the World in Statistics—A short 150 to 200 word article about how statistics is making life better for the people of your country

Statistician Job of the Week-A short 150 to 250 word article, written by any members talking about his/her job as a statistician and how he/she is contributing to improving our global

Statistics in Action—A photo with a brief caption that shows how statistics improves the quality of life of your country's people.

or other topics for the website at any time by emailing the items to Richard Emsley and Jeff Myers of the American Statistical Association at .

The Steering Committee are also seeking a core group of regular bloggers to feature on the new website blog

and are particularly keen for young statisticians to contribute to this. If anyone would like to become a blogger and contribute to this collective endeavor, please contact Richard or Jeff as above.



### Roundup of Newsletter

Next year 2013 is the International Year of Statistics (IYS). Please contribute to this by adding events to achieve one event a day worldwide! Email Ron Wasserstein to do this. Also add the IYS logo to your website! Details of the IYS Video Competition can be found here. The Channel

Network meeting programme is here. The BIR is sponsoring the 36th Research Students' Conference. The <u>Intergrated population</u> modelling meeting was a great success. Speakers at the <u>40+ years of Cox model</u> meeting guest starring Sir David Cox have been announced. Richard Emsley and

other members of the BIR are proud to kickstart the UK's own <u>Causal Inference</u> meeting. James Carpenter gives his comments. Finally membership renewal information including the form are <u>here.</u>

#### President's corner



John with current IBS president. Clarice Demetrio

It seems no time at all since I took over as BIR President, but very soon my two-year period of office will be up and I shall be passing the Region over to Simon Thompson. Rather unexpectedly for me, this will coincide with my taking up office as the incoming vice-President of the IBS, an exciting and challenging pro-

spect. With the reform of the governance now in place and the election of members to the executive committee under way, I hope that my period of office will be one where we can build upon these democratic changes within the IBS to produce a stronger, more engaged, and internationally integrated scientific society.

### Inside this issue: CHANNEL NETWORK 2 2 RSC 2012 3 INTEGRATED POPULA-TION MODELLING PROPORTIONAL HAZARDS UK CAUSAL INFERENCE 3 MEETING SECRETARY'S COMMENTS INTERNATIONAL YEAR OF STATISTICS VIDEO COMPE-KOBE AWARD WINNERS MEMBERSHIIP 5





#### President's corner continued

For both the Society at large and the BIR, a key aspect for officers and committees is communication with the members. In the Region we now have excellent ways of disseminating information to members through email, the website, and this newsletter. But the flow of information in the other direction is more problematic. Of course, through broad representation on our Regional Committee and involving members in scientific meetings, etc, we attempt to obtain some idea of what you value in your Biometric Society membership. However, it can be difficult to know what else you would be interested in and how you would like to see the Society developing to serve your needs. Under an IBS Strategic Initiative we have started a BIR pilot project on Communication with Young Members of the Region. The aim is to see how the Region/Society can reach out to its young and student

members, possibly making use of social media, to enhance the sense of a biometrics community. The project is being led by Rhian Daniel (LSHTM) and I wish her well in this endeavour.

Conferences are always a great way of meeting new people, exchanging ideas, and forming research collaborations. The Channel Network Conference in St Andrews in July of next year will be an excellent opportunity for the Region and all members, young and older, to meet up. Then in 2014 the IBC will be held in Florence, somewhat easier to get to than Japan. I hope to meet many of you at these events and for you to tell me what you think of the BIR and the IBS - what we are doing well, what needs changing, and what you would like to see us doing in the future. Please don't be

### Channel Network Meeting Sue Welham

This conference will be hosted at the University of St Andrews from 3-5th July 2013.

The conference will start at lunchtime on Wednesday 3rd July and finish at lunchtime on Friday 5th July, with pre-conference workshops taking place on the Wednesday morning. University accommodation is available from Tuesday to Saturday. The programme includes a keynote address by Geert Verbeke, the annual Fisher Memorial Lecture by David Spiegelhalter and invited sessions on Statisical Ecology, Mixed Modelling and Advances in Genomics. Contributed talks and posters are also sought (details to follow).

Keynote speaker: Geert Verbeke (KU Leuven)

Fisher Memorial Lecture: David Spiegelhalter (Cambridge)

**Invited sessions** 

Statistical Ecology: David Borchers (University of St

Andrews), Eleni Matechou (Oxford University), Jérôme Dupuis (Université Paul Sabatier, Toulouse)

Mixed modelling: Simon Wood (Bath University), Ingelin Steinsland (Norwegian University of Science and Technology), Adeline Samson (Université Paris Descartes)

Advances in genomics: Mark van de Wiel (VU University Amsterdam), Hae Won Uh (Leiden University Medical Center), Hongzhe Li (University of Pennsylvania)

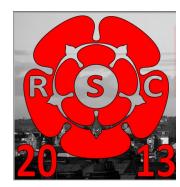
Pre-conference workshops

Parameter redundancy: Diana Cole (University of Kent)

**Current Methods in Mixed** Modelling: Peter Diggle (University of Lancaster)



### 36th Research Students' Conference



BIR is proud to sponsor the 36th Research Students' Conference in Statistics.

The conference will take place on the 25th-28th March 2013 at Lancaster University. The conference is open to PhD students or equivalent in any field relating to probability, statistics or social statistics. This year

we are extending the scope of the conference to also include social statisticians.

The RSC is a conference that is organised for students by students. We aim to provide a friendly atmosphere where you can make interinstitution connections and discuss ideas freely. Furthermore, this will be the first

opportunity for some delegates to present their research before an international audience. There are no entry requirements and all delegates are encouraged to present some of their work either by a talk or a poster, although this is not mandatory.





### Integrated population modelling Diana Cole

On 24th September ecologists and statisticians got together for an joint meeting of the Environmental Statistics Section of the Royal Statistical Society British and Irish region of the Biometric Society and the Computational Ecology Special Interest Group of the British Ecological Society on Integrated Population modelling. The meeting started with a

tutorial talk on integrated population modelling by Takis Besbeas (Athens University of Business and Economics, University of Kent). Then over lunch 8 posters were presented including both the theoretical and applied aspects of integrating different data sets. In the afternoon four speakers presented their work. Takis Besbeas gave

another talk on Recent developments in integrated population modelling, Fitsum Abadie (Centre D'Ecologie Fonctionn elle & Evolutive) talked on Combining demographic and population count data to estimate immigration rate and the strength of density dependence, Jason Matthiopoulos (University of St. Andrews)

gave a talk about State-space modelling reveals the proximate causes of harbour seal population declines and Allan Tucker (Brunel University) talked on Dynamic probabilistic models for predicting regime shifts in fish populations. The meeting ended with a discussion led by Byron Morgan (University of Kent).

### Celebrating 40+ years of the Cox Model Daniel Farewell

Together with the Centre for Statistical Methodology at the London School of Hygiene and Tropical Medicine, we're pleased to announce a scientific meeting to mark 41 years of Sir David Cox's celebrated relative risk model for time-to-event data. The meeting will take place on 8 March

2013 in the John Snow (formerly Goldsmiths) Lecture Theatre at the London School of Hygiene and Tropical Medicine, where the "proportional hazards" paper was read before the Royal Statistical Society on 8 March 1972. The meeting will include presentations of novel research in event-



history analysis, and a historical perspective on the impact of the paper. The meeting starts at 11:00am, and speakers include Bianca De Stavola, Torben Martinussen, Paul Lambert and Robin Henderson (pictured). Sir David Cox will provide a brief reflection at the end of the meeting.

### First UK Causal Inference Meeting Richard Emsley

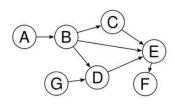
Members of the Region are involved in organising the first UK Causal Inference Meeting (UK-CIM) in May 2013. This is a new initiative to organise a regular UK wide meeting on causal inference as a collaborative effort across the methodology research community in the health and social sciences, including the Biometric community.

The theme of the meeting is "Causal Inference in Health and Social Sciences". Causal inference is broadly defined, and the focus is on methodology and challenging applications, though submissions relating to interesting applications that highlight necessary methodological extensions are also encouraged. It aims to provide a forum for people interested in causal inference to meet informally, for early career researchers to highlight their work, and to offer opportunities for networking to foster future research opportunities and

collaborations.

The first meeting will take place on Tuesday 14th and Wednesday 15th May 2013 at The University of Manchester. The keynote speaker is Stijn Vansteelandt (Ghent), and the meeting will feature 20 contributed presentations in single sessions. Abstract submission is open until 1st February 2013 to anyone who would like to present their relevant work. Registration fees are £60 for academics and £30

for students, and is limited to 100 places which will be allocated on a first-come first-served basis. More information including the online registration and abstract submission form are available at the meeting



causal graphical model





### Secretary's comments

The AGM will take place at 1.15pm on Thursday 29th November, at Fowden Conference Hall, Rothamsted Research, Harpenden, Hertfordshire, AL5 2JQ (during the lunchbreak of the 1-day meeting on Generalized Linear Models).

Besides receiving annual reports from the Secretary, Membership Secretary and Treasurer, the main item of

business is the committee elections.

The Secretary (James Carpenter), Treasurer (Mark Brewer) and the membership secretary (Diana Cole) are all eligible for re-election and happy to continue in office.

In addition, Dr Sara Geneletti and Dr Richard Emsley come to the end of their 3

year terms on the committee this November.

Dr Rachel McCrea, having completed two years of her three year term, is on maternity leave for the next year.

Thanks to them for their valuable contribution to the Society.

The committee are pleased to nominate Dr Rhian Daniel (London School of Hygiene

& Tropical Medicine) and Dr Michael Sweeting (MRC Biostatistics Unit, Cambridge) for election at the AGM, to serve for three years.

In addition, the committee are pleased to nominate Dr Peter Colman (AstraZeneca) to serve for one year.

#### 2013 IYS Video competition Richard Emsley

#### Video contest - deadline extended!

John Wiley and Sons, Inc., is sponsoring the prizes for the International Year of Statistics video competition and the deadline for submissions has been extended to until February 28th 2013. We would like to encourage members to submit a video of four minutes in length or less that illustrates:

1) how statistics positively impacts the lives of your

country's citizens, improves society, or in general makes the world a better place

2) how statistical thinking can be brought to bear on important issues of our dayinteresting careers in statistics (tell the world why your job in statistics is so great, or why it is interesting and fun to be a statistician)

Cash prizes of \$250 to \$1,000 (U.S.) will be awarded for the best videos, with special prizes for the best videos by a person or a group of people 18 years of age or less and the best non-English language video. Please provide a written English translation of the video script or incorporate English subtitles into



the finished production. Entries will be judged on statistical content and entertainment value. All submissions must be an original production and creation of the entrants and must not infringe on copyrighted materials or productions. Submissions must be posted on YouTube. Please visit the competition website for more details. Can the BIR win this competition??

### Kobe Award Winners Richard Emsley

The BIR enjoyed fantastic success at the recent IBC in Kobe, with several members receiving conference awards. Marina Evangelou (MRC Biostatistics Unit) won first prize for Best Oral Communication, whilst Ho Ming (Brian) Yuen (Southampton) won first prize for Best Poster. Congratulations to both Marina and Brian!

Congratulations also to Emmanuel Ogundimu (Warwick), Wai Yin Yeung (Queen Mary, London) and Markus C Elze (Warwick), who all won second prizes for Best Oral Communication. All three members had received Fisher Memorial Trust-BIR Bursary Awards to enable them to attend the conference, and in total Fisher Memorial Trust-BIR bursa-

ries were awarded to six students. A condition for the award was that they write a report about their experiences, and all report that the conference was an interesting scientific and cultural experience, and provided opportunity for networking and interacting with experts in the field, none of which would have been possible for them without the Awards. Below are some of

the comments they made. The full reports can be found on the BIR website.

Alice Parry, from Lancaster presented Analysing Malaria Trials on a Per Clone Basis: A New Approach, She felt that "[h]earing about new research in similar, and sometimes not so similar areas, greatly furthered [her] statistical knowledge and de-





velopment". Nicola Reeve also from Lancaster spoke on Spatial Methods for Analysis of Cancer Incidence and Mortality in Vicinity of Large Incinerators in England 1998 -2008. She said: "As a result of the bursary, I have raised awareness of my work within the field and received valuable feedback on my work from topical experts." Wai Y. Yeung from QMUL presented on Imbalance Properties of Centre-Stratified Permuted Block Randomization and Complete Randomization for Several Treatments in a Clinical Trial "[She] was delighted to find

that [experts] were excited about [her] work". Philip Law from Warwick spoke about Clustering Cross-Sectional Time Series Gene **Expression Profiles Using** Parametric Regression. "A session of particular interest to [him] was the Young Statisticians Showcase, where [he] was able to see what interesting projects other students are working on, and what techniques are being used to approach their problems." Emmanuel O. Ogundimu, also from Warwick presented A General Sample Selection Model with Underlying Skew-Normal

Distribution and was was proud that "this was the first talk [he had] given in a truly international setting". Finally, Markus Elze from Warwick presented a talk entitled Modelling Survival Following Bone Marrow Transplantation Using Longitudinal Immune Measurements at Arbitrary Time Points. He says: "As a result of [some] discussions, I exchanged e-mail addresses with several people and hope to stay in contact and possibly collaborate in the future."

Look out for the Bursary Awards ahead of the next IBC in Florence in 2014!

"AS A RESULT OF THE **BURSARY, I HAVE** RAISED AWARENESS OF MY WORK WITHIN THE FIELD AND RECEIVED VALUABLE FEEDBACK ON MY WORK FROM **TOPICAL EXPERTS."** NICOLA REEVE PHD **STUDENT** 

### AGM and "Generalized Linear Models 40 years on" William Browne

Following this year's AGM at Rothamsted a well attended meeting was held to celebrate 40 years since the publication of the paper by Nelder and Wedderburn that introduced generalized linear models.

The meeting was chaired by the incoming president Simon Thompson and began with a presidential address from John Hinde entitled glms: a personal perspective John began by placing the paper by Nelder and Wedderburn in the context of work in the field at the time. He went on to describe how the paper had influenced his own work, mentioning the 2 statistical modelling books, the IWSM conferences and the Statistical Modellina iournal that have all followed on. He discussed extensions to GLMs including random effects and overdispersion. Having described how important examples

were in the original paper he illustrated extensions using more examples including modelling sugar-cane parasites, schizophrenia patients and gene expression profiles for fruit flies

The next speaker was Mike Kenward who talked on Hierarchical Likelihood - A Neutral's perspective. Hierarchical likelihood was related to extending the work in the original paper to include random effects and was formulated by Nelder with his co-author YoungJo Lee. Mike described his conversations with John Nelder and YoungJo Lee over the period that they worked on the idea. He mentioned both Xiao-Le Meng's and his own 2009 critiques of Hierarchical likelihood and stressed that although the idea of Hierarchical Likelihood itself had not been greeted with universal approval, many important

computational ideas were contained in the papers.

After a coffee break Heather Turner's talk entitled From L to N: Nonlinear predictors in Generalized Models covered another extension of GLMs to GNMs (generalized non-linear models). She described how introducing nonlinear predictors made it harder to incorporate identifiability constraints into the modelling and showed how this could be circumvented using generalized inverses and reparamerisation post-fitting.. She gave examples including a contingency table of mental health status, biplots of barley varieties and using stereotype models. All the modelling was done using the gnm package in R that she had developed with David Firth.

The final speaker was Leo Held whose talk was entitled All you need is the deviance was on the subject of objective Bayesian model selection in GLMs. He considered how to perform model selection for GLMs. He discussed his own work with Daniel Sabanes Bove that built on earlier work by Valen Johnson. He also linked to the work of John Copas who had come up with similar approaches. Leo then considered the problem of predictive inference with an example dataset on diabetes in Pima Indians and a second example of a Cox regression. He showed that the median probability model had very good properties and considered both the standard model selection case and the case of including fractional polynomials of the predictors.

The meeting ended with some further discussion. Many audience members shared their experiences of interactions with John Nelder.





### **Upcoming PSI events**

Some of you may be interested to know that PSI (Statisticians in the Pharmaceutical Industry) and BIR have a bilateral agreement to advertise each others meetings. Here are some of

their upcoming events:

6th December: Pharmaceutical Statistics Journal Club:
Discussion of two papers on
Modelling in Drug Development.

27th February 2013: Meeting on The Design and Analysis of Observational Studies.

18th April 2013: Meeting on Predictive Inference:

Can this Reduce Late Phase Failures?

12th/15th May 2013: Annual Conference, Glasgow

For more information visit the website.

### Membership up for renewal!

Biometric society Membership for 2013 is now due. The fees for 2013 remain unchanged:

- Full Member: £40
- Retired Member: £20
- Biometrics and the Biometric Bulletin: £7 extra
   JABES and the Biometric
- JABES and the Biometric Bulletin: £7 extra

- JABES, Biometrics and the Biometric Bulletin: £14 extra
- Student Member: Free If you are a full or retired Members, there are several ways that you can pay for your membership for next year.
- Standing order: If you have set up a standing order your membership your memberhsip renewal is automatic each year. If you want

to set up a standing order please contact <u>Mark Brewer</u>

- Cheque: If you pay by cheque send the form at the end of this newsletter with your cheque to Mark Brewer (address is on the form).
- Paypal: Go to <a href="https://biometricsociety.org.uk/amember/signup">https://biometricsociety.org.uk/amember/signup</a> to pay

your membership.

If you are a student member your membership renewal is automatic until the end date of your course. If the end date of your course has changed please inform Diana Cole, The membership form is the last page of this newsletter

### And Finally....





## International Biometric Society, British and Irish Region

IBERSHIP for	
TEGORY: Please check	
(Annual Subscription 40 pounds sterling) Full bent tronic subscription to Biometrics, Journal of Agric tal Statistics (JABES) and the Biometric Bulletin,	ultural, Biological, and Environmen-
(Annual Subscription 20 pounds sterling) All the retired category is open to anyone who has been a m is no longer in paid employment (working less than	ember for at least 10 years, and who
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